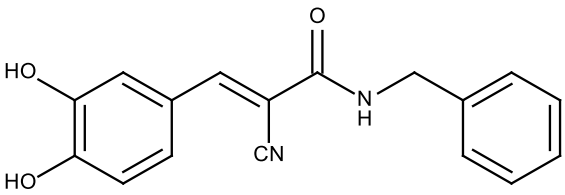
Catalog # 10-1091

AG-490

CAS# 133550-30-8

(*E*)-2-Cyano-3-(3,4-dihydrophenyl)-*N*-(phenylmethyl)-2-propenamide

Lot # X101130



A potent inhibitor of the JAK-2 tyrosine kinase. In acute lymphoblastic leukemia (ALL) cells, which abundantly express JAK-2, AG-490 dose-dependently blocked cell growth, induced apoptosis and inhibited DNA synthesis. Blocks the growth of all pre-B ALL cells with no effect on normal B or T cells. Does not significantly inhibit other kinases such as Lck, Lyn, Btk, Syk and Src. Reduces liver injury in LPS-induced shock.[3] A useful tool for exploring the role of JAK2/STAT3 pathway in physiologic processes.[4]

1) Wang *et al.* (1999), *JAK3, STAT, and MAPK signaling pathways as novel molecular targets for the tyrphostin AG-490 regulation of IL-2-mediated T cell response*; J. Immunol. **162** 3897
2) Meydan *et al*. (1996), *Inhibition of acute lymphoblastic leukaemia by Jak-2 inhibitor;* Nature **379** 645
3) Gyurkovska and Ivanovaska (2015), *Tyrosine kinase inhibitor tyrphostin AG490 reduces liver injury in LPS-induced shock;* Eur. J. Pharmacol. **751** 118
4) Wu *et al.* (2015), *ROS generated during early reperfusion contribute to intermittent hypobaric hypoxia-afforded cardioprotection against postischemia-induced Ca(+2) overload and contractile dysfunction via the JAK2/STAT3 pathway*; J. Mol. Cell. Cardiol. **81** 150

PHYSICAL DATA

Molecular Weight:	294.31
Molecular Formula:	$C_{17}H_{14}N_2O_3$
Purity:	98% by TLC [10% methanol/methylene chloride, R_f = 0.50]
	NMR: (Conforms)
Solubility:	DMSO (up to 30 mg/mg), DMF (up to 40 mg/ml), ethanol (up to 10 mg/ml)
Physical Description:	Tan solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO, DMF or ethanol may be stored at -20°C for up to 1 month.

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